TNC Team

Alaska

Randy Hagenstein,
State Director

Marcus Geist,
Spatial Data Manager

Jessica Speed,
Conservation Coordinator

Global Marine Program

The Nature Conservancy
Protecting nature. Preserving life.™

Primary Tasks

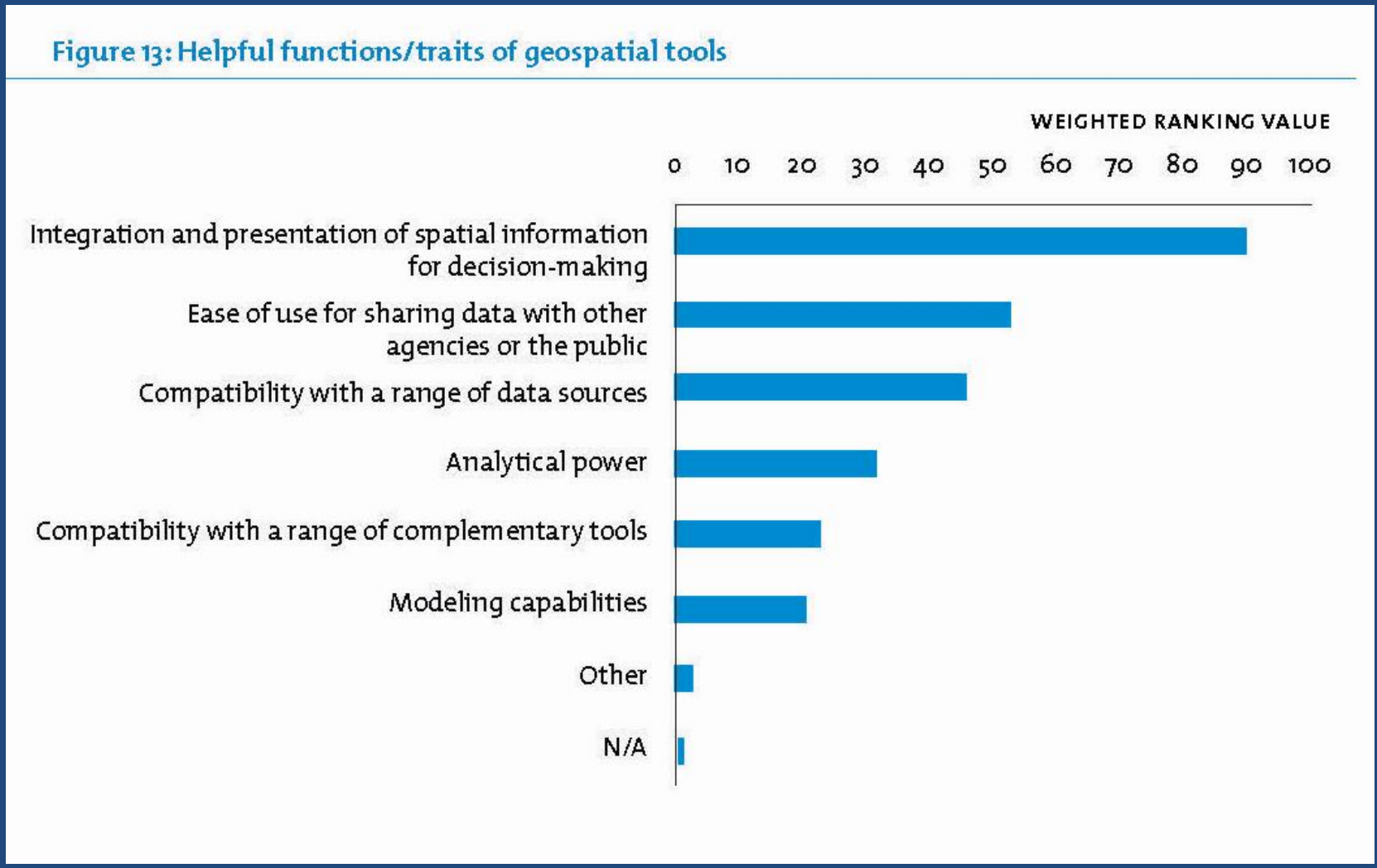
- Interviews

- Decision Support Tools

Primary Tasks

- Interviews: - Jessica Speed
  - What decisions?
  - What data?
  - Who to Interview?

Interviews – Sample Summary



Center for Ocean Solutions "Colloborative Geospatial Information and Tools for California Coastal and Ocean Managers Workshop"

Primary Tasks

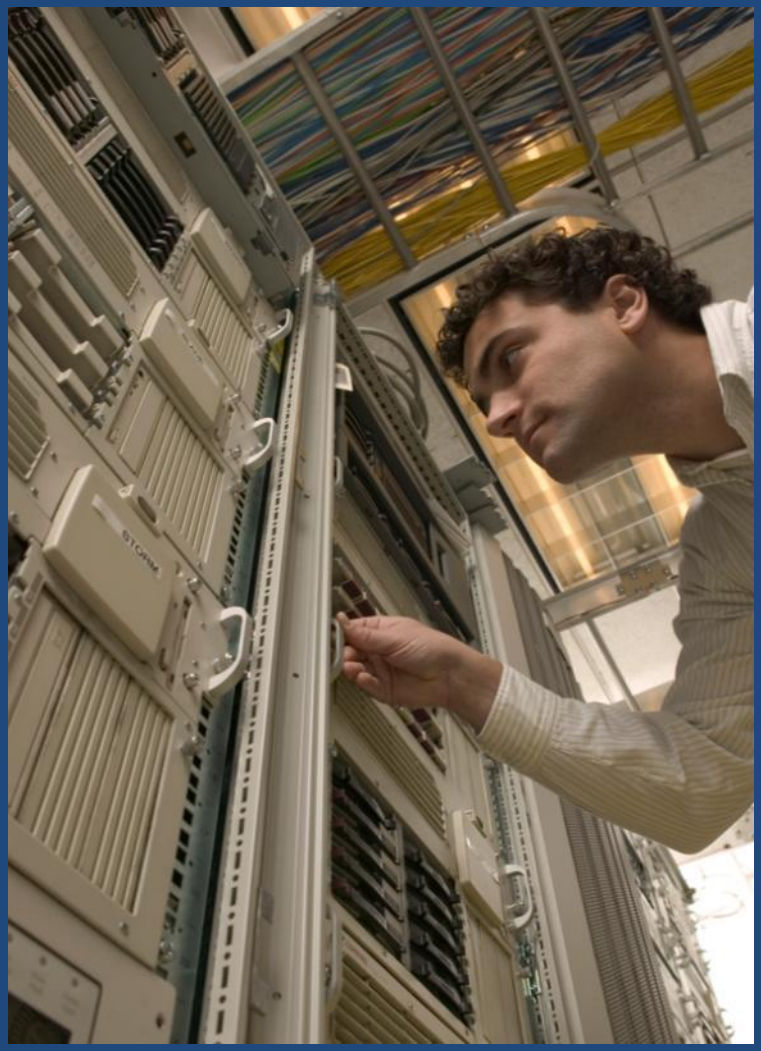
Decision Support Systems: - Marcus Geist

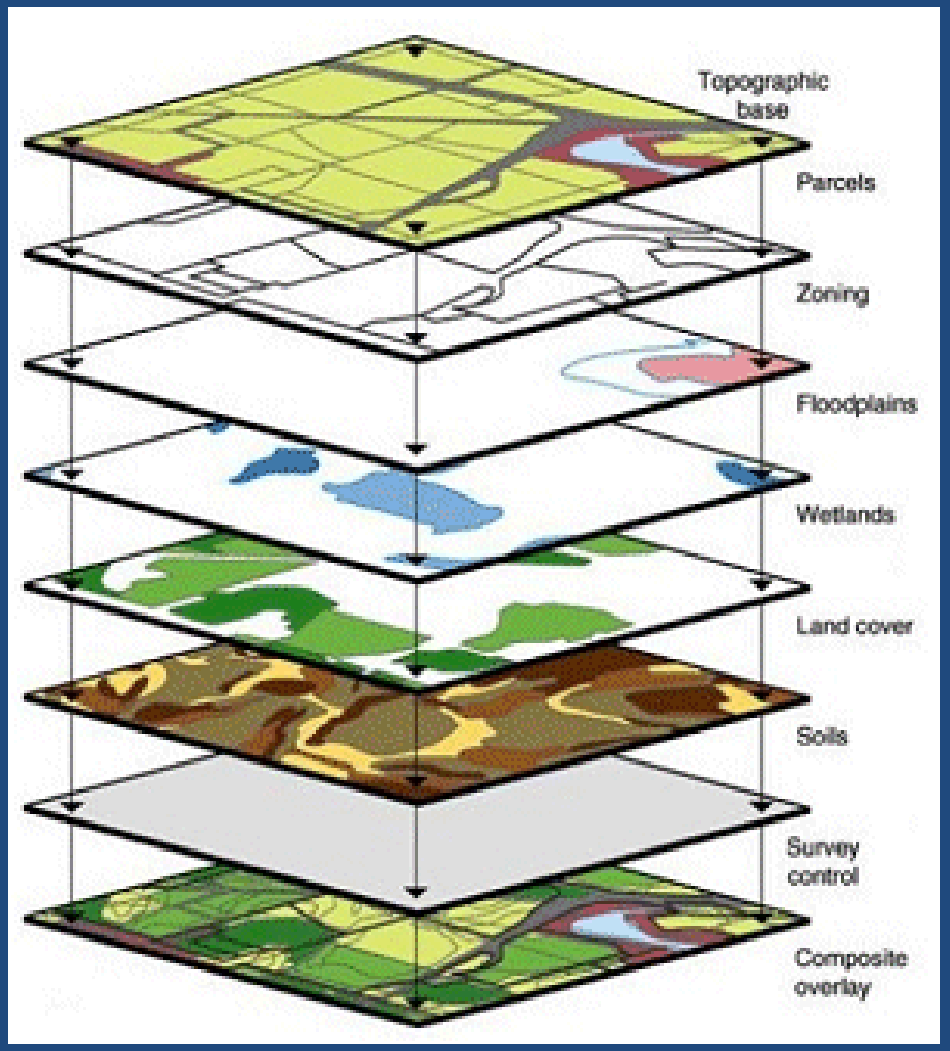
Today's Goal – Have a report Framework

- DSS in Alaska
- Other Marine DSS?
- Best Fit for Alaska?

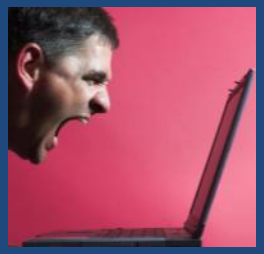
Decision Support Systems

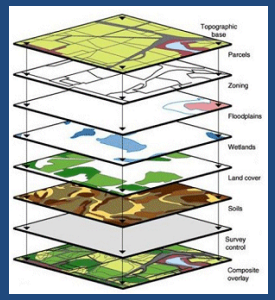
Decision Support Systems

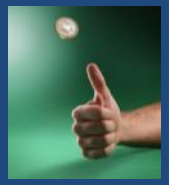




Decision Support Systems







complex

Complexity

simple

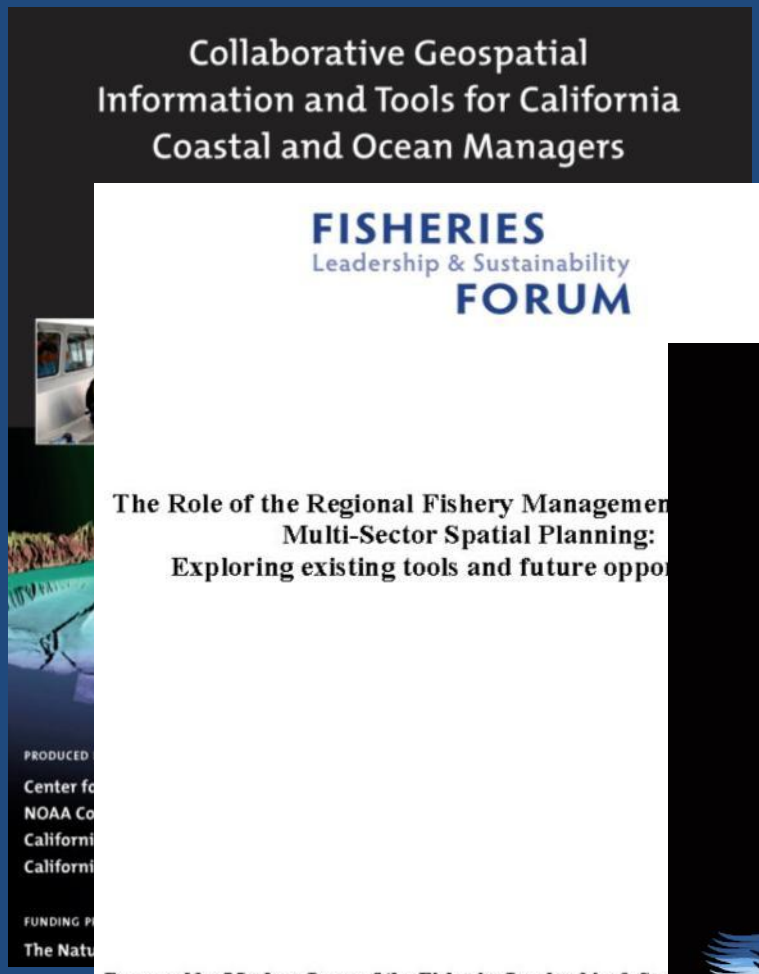
narrow

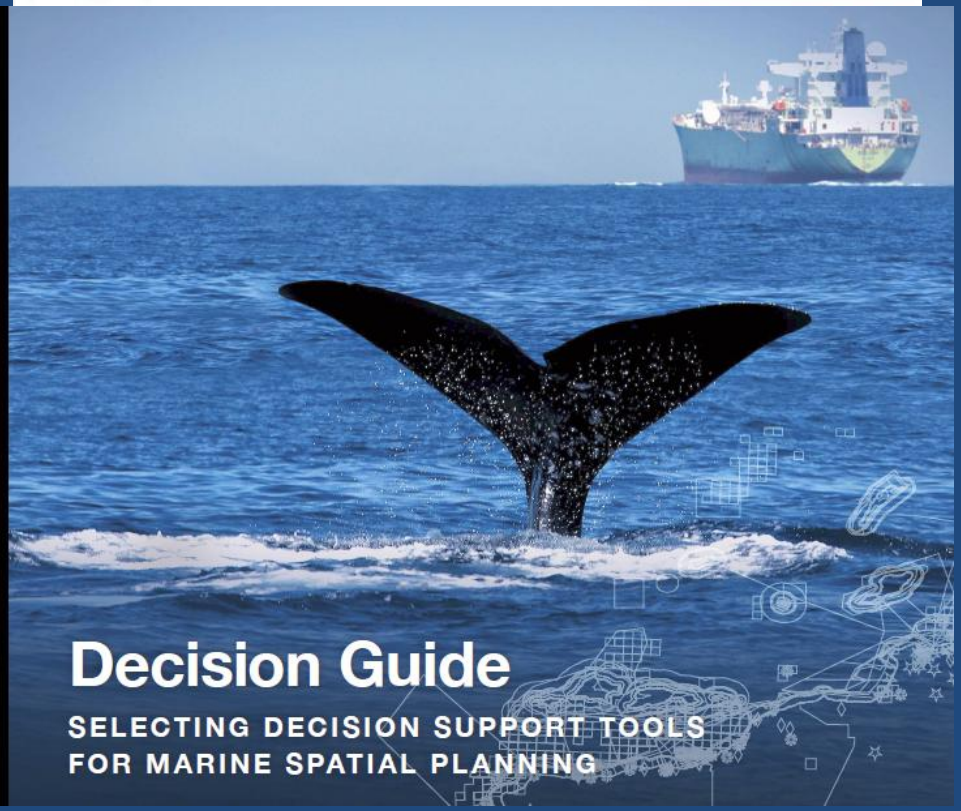
Participation

broad

Decision Support Systems

Choices, Choices, Choices





Decision Support Functions

PROCESS MATRIX

This Process Matrix shows the generic steps of a marine spatial planning process and the DST functions (detailed in Chapter 5) that can add value to each of the steps.

	PROCESS STEP					
	Gather data and define current conditions	Identify issues, constraints, and future conditions	Develop alternatives	Evaluate alternatives	Monitor and evaluate management measures	Refine goals and objectives
TOOL FUNCTION						
Data management	✓					
Mapping and Visualization	✓	✓	✓	✓	✓	✓
Alternative scenario development and analysis		✓	✓	✓		
Management measure option proposal			✓	✓		
Stakeholder participation and collaboration, and community outreach and engagement	✓	✓	✓	✓	✓	✓
Adaptive management and assessment of achieving objectives				✓	✓	✓

DSS meets Consumer Reports

Functions	Decision Support Tools				DEC
	ARIES	Atlantis	Coastal Resilience	Cumulative Impacts	
DATA MANAGEMENT					
Data provisioning	✓		✓	✓	
Data quality assessment	✓				
Data upload & archival	✓		✓	✓	
Data development			✓		
MAPPING & VISUALIZATION					
Spatial					
Basemaps/Physical	✓		✓	✓	
Habitats/species	✓		✓	✓	
Ecosystem services	✓				

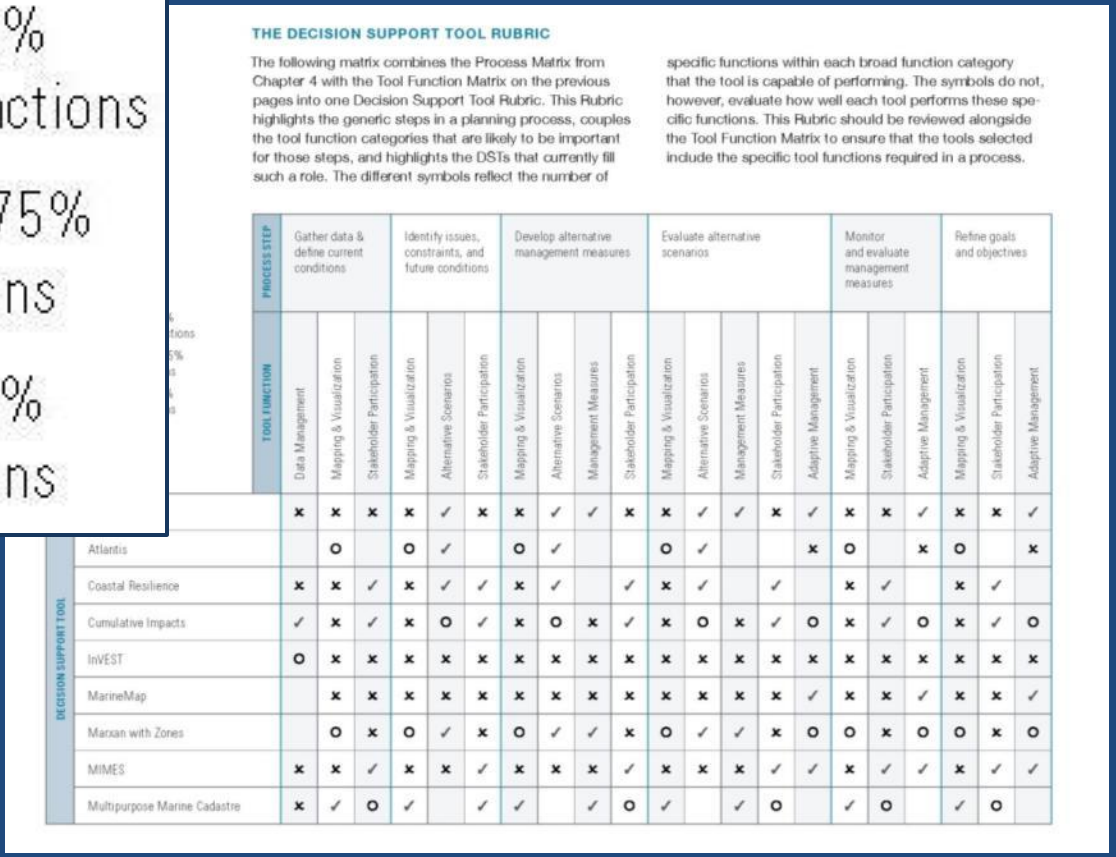
OL FUNCTION

DSS Report Card

✗ performs ≥ 75% of the tool functions

✓ performs 50–75% of tool functions

○ performs < 50% of tool functions

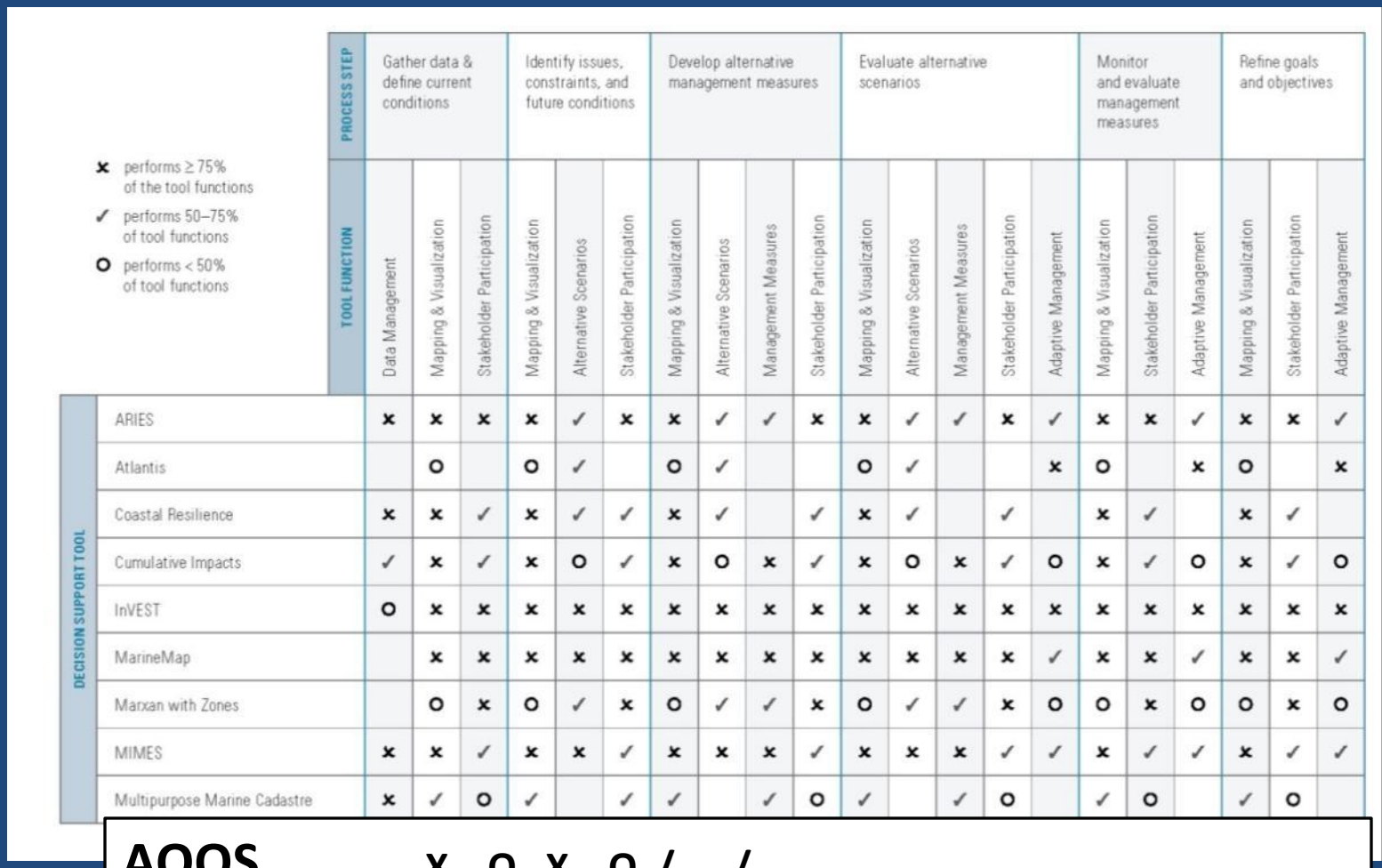


THE DECISION SUPPORT TOOL RUBRIC

The following matrix combines the Process Matrix from Chapter 4 with the Tool Function Matrix on the previous pages into one Decision Support Tool Rubric. This Rubric highlights the generic steps in a planning process, couples the tool function categories that are likely to be important for those steps, and highlights the DSTs that currently fill such a role. The different symbols reflect the number of specific functions within each broad function category that the tool is capable of performing. The symbols do not, however, evaluate how well each tool performs these specific functions. This Rubric should be reviewed alongside the Tool Function Matrix to ensure that the tools selected include the specific tool functions required in a process.

PROCESS STEP	Gather data & define current conditions			Identify issues, constraints, and future conditions			Develop alternative management measures				Evaluate alternative scenarios					Monitor and evaluate management measures			Refine goals and objectives		
TOOL FUNCTION	Data Management	Mapping & Visualization	Stakeholder Participation	Mapping & Visualization	Alternative Scenarios	Stakeholder Participation	Mapping & Visualization	Alternative Scenarios	Management Measures	Stakeholder Participation	Mapping & Visualization	Alternative Scenarios	Management Measures	Stakeholder Participation	Adaptive Management	Mapping & Visualization	Stakeholder Participation	Adaptive Management	Mapping & Visualization	Stakeholder Participation	Adaptive Management
	✗	✗	✗	✗	✓	✗	✗	✓	✓	✗	✗	✓	✓	✗	✓	✗	✗	✓	✗	✗	✓
DECISION SUPPORT TOOL																					
Atlantis		○		○	✓		○	✓			○	✓			✗	○		✗	○		✗
Coastal Resilience	✗	✗	✓	✗	✓	✓	✗	✓		✓	✗	✓		✓		✗	✓		✗	✓	
Cumulative Impacts	✓	✗	✓	✗	○	✓	✗	○	✗	✓	✗	○	✗	✓	○	✗	✓	○	✗	✓	○
InVEST	○	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
MarineMap		✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✓	✗	✗	✓	✗	✗	✓
Marxan with Zones		○	✗	○	✓	✗	○	✓	✓	✗	○	✓	✓	✗	○	○	✗	○	○	✗	○
MIMES	✗	✗	✓	✗	✗	✓	✗	✗	✗	✓	✗	✗	✗	✓	✓	✗	✓	✓	✗	✓	✓
Multipurpose Marine Cadastre	✗	✓	○	✓		✓	✓		✓	○	✓		✓	○		✓	○		✓	○	

STAMP Report ?



× performs ≥ 75% of the tool functions
✓ performs 50–75% of tool functions
O performs < 50% of tool functions

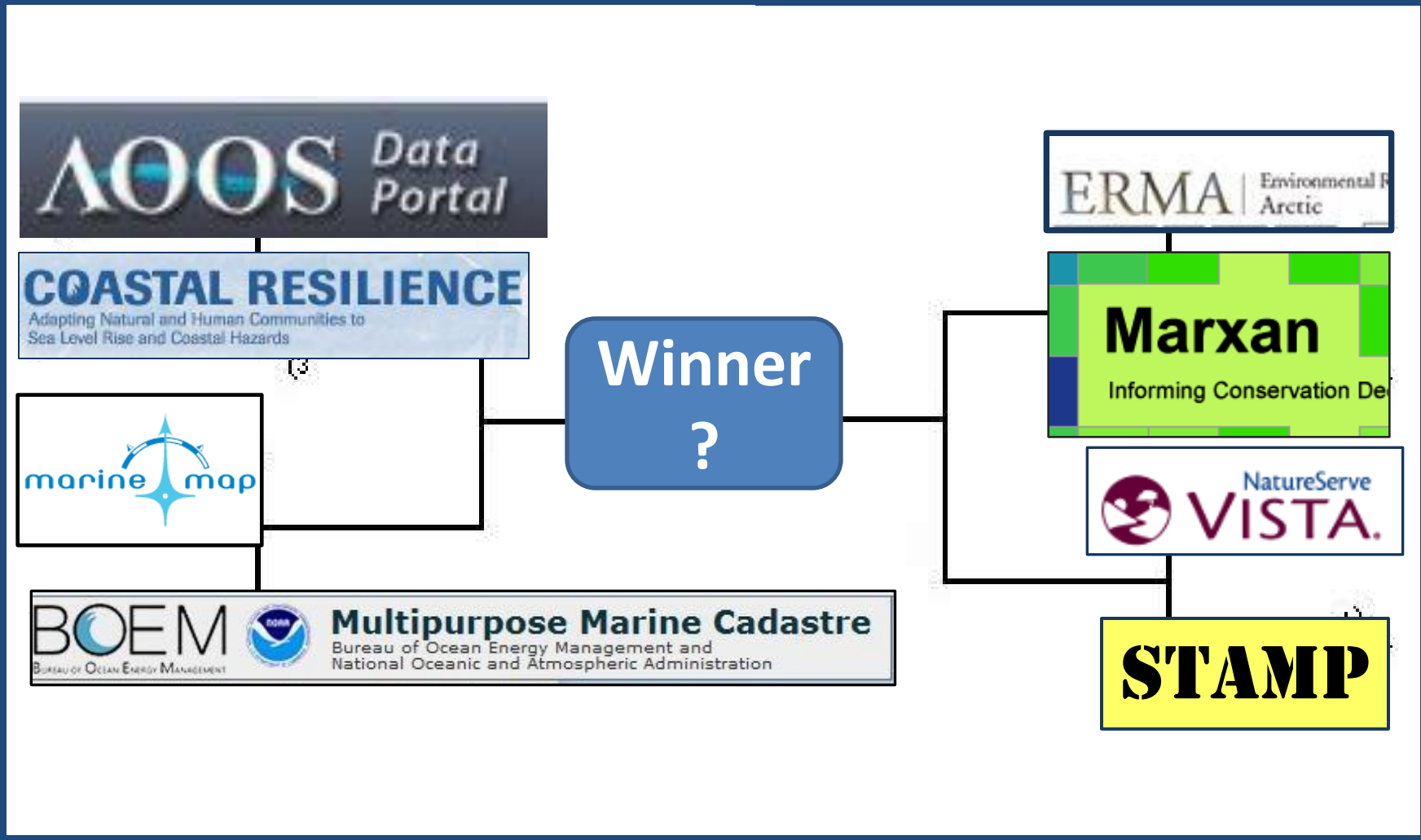
DECISION SUPPORT TOOL	Gather data & define current conditions			Identify issues, constraints, and future conditions			Develop alternative management measures				Evaluate alternative scenarios					Monitor and evaluate management measures			Refine goals and objectives		
TOOL FUNCTION	Data Management	Mapping & Visualization	Stakeholder Participation	Mapping & Visualization	Alternative Scenarios	Stakeholder Participation	Mapping & Visualization	Alternative Scenarios	Management Measures	Stakeholder Participation	Mapping & Visualization	Alternative Scenarios	Management Measures	Stakeholder Participation	Adaptive Management	Mapping & Visualization	Stakeholder Participation	Adaptive Management	Mapping & Visualization	Stakeholder Participation	Adaptive Management
ARIES	×	×	×	×	✓	×	×	✓	✓	×	×	✓	✓	×	✓	×	×	✓	×	×	✓
Atlantis		O		O	✓		O	✓			O	✓			×	O		×	O		×
Coastal Resilience	×	×	✓	×	✓	✓	×	✓		✓	×	✓		✓		×	✓		×	✓	
Cumulative Impacts	✓	×	✓	×	O	✓	×	O	×	✓	×	O	×	✓	O	×	✓	O	×	✓	O
InVEST	O	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
MarineMap		×	×	×	×	×	×	×	×	×	×	×	×	×	✓	×	×	✓	×	×	✓
Marxan with Zones		O	×	O	✓	×	O	✓	✓	×	O	✓	✓	×	O	O	×	O	O	×	O
MIMES	×	×	✓	×	×	✓	×	×	×	✓	×	×	×	✓	✓	×	✓	✓	×	✓	✓
Multipurpose Marine Cadastre	×	✓	O	✓		✓	✓		✓	O	✓		✓	O		✓	O		✓	O	

AOOS x o x o / /

Arctic ERMA x x x o x o / /

Dynamic Ice?

Marine Madness



Contact

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